R E P O R T R E S U M E S

ED 011 406 EA 000 456

THE APPROPRIATE GRADE LEVEL PLACEMENT OF TEACHERS IN THE ELEMENTARY SCHOOL.

BY- O'CONNOR, LLOYD R.

PUB DATE 16 FEB 67

EDRS PRICE MF-$0.09 HC-$0.68 17P.

DESCRIPTORS- *ELEMENTARY SCHOOL TEACHERS, *TEACHER PLACEMENT, *INSTRUMENTATION, TEACHER CHARACTERISTICS, STUDENT CHARACTERISTICS, STATISTICAL ANALYSIS, *AGE GROUPS, *STUDENT TEACHER RELATIONSHIP, KUDER RICHARDSON FORMULA 20, NEW YORK CITY

ELEMENTARY SCHOOL TEACHERS' RESPONSES TO THE EMOTIONAL AND DEVELOPMENTAL CHARACTERISTICS OF CHILDREN WERE USED TO DEVELOP A TEST INSTRUMENT WHICH WOULD BE OF VALUE TO TEACHERS, TEACHER-TRAINING PERSONNEL, AND SCHOOL ADMINISTRATORS FOR THE PLACEMENT OF TEACHERS AT THE MOST APPROPRIATE GRADE LEVEL. ELEMENTARY TEACHERS WERE DIVIDED INTO PRIMARY GRADES (KINDERGARTEN THROUGH GRADE 3), INTERMEDIATE GRADES (GRADES 4 THROUGH 6), AND UPPER GRADES (GRADES 7 AND 8). A FORM OF 431 STATEMENTS DESCRIPTIVE OF CHARACTERISTICS AND BEHAVIOR OF ELEMENTARY SCHOOL-AGED CHILDREN WAS DEVELOPED AND ADMINISTERED TO 50 TEACHERS IN EACH OF THE PRIMARY, INTERMEDIATE, AND UPPER GRADE LEVELS. OF THE 431 STATEMENTS, 150 DIFFERENTIATED AMONG THE THREE GRADE LEVEL GROUPS WHEN SUBJECTED TO A CHI-SQUARE ANALYSIS (.05 LEVEL), PERMITTING A SCORING KEY FOR EACH OF THE THREE GRADE LEVELS TO BE CONSTRUCTED. THE TEST INSTRUMENT PROVIDED RELIABILITY IN DIFFERENTIATING TEACHERS AT THE THREE LEVELS ACCORDING TO THE KUDER-RICHARDSON FORMULA 20 TECHNIQUE AND THE DERIVATION OF STANDARD ERRORS OF MEASUREMENT. THE DIFFERENTIATION OF THE THREE SCORING KEYS WAS SIGNIFICANT ACCORDING TO THE F-TEST AT THE .01 LEVEL IN THE FORMER EXPERIMENTAL SAMPLE OF 150 TEACHERS, AND AT THE .02 LEVEL IN A CROSS-VALIDATION SAMPLE OF 178 EXPERIENCED TEACHERS. TWO OF THE THREE SCORING KEYS ALSO GAVE SIGNIFICANT RESULTS IN A CROSS-VALIDATION OF 80 STUDENT TEACHERS. PRELIMINARY DATA FROM A FOLLOWUP STUDY IN PROGRESS APPEARED TO REINFORCE THE VALIDITY OF THE THREE GRADE-LEVEL SCORING KEYS. THIS PAPER WAS READ AT THE AMERICAN EDUCATIONAL RESEARCH ASSOCIATION CONFERENCE (NEW YORK CITY, FEBRUARY 16, 1967). (GD)

THE APPROPRIATE GRADE LEVEL PLACEMENT OF TEACHERS IN THE ELEMENTARY SCHOOL

paper read at session

16 February 1967 of the

American Educational Research Association

New York City

Lloyd R. O'Connor
Eastern Oregon College

ED011406

EA000456

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

THE APPROPRIATE GRADE LEVEL PLACEMENT OF TEACHERS IN THE ELEMENTARY SCHOOL

LLOYD R. O'CONNOR

When a person decides to enter the teaching profession, a wide choice of possibilities confronts him. At present a person's choice of the level of teaching is often made without adequate guidance regarding the nature of the children or youth with whom he is committed to work. That this be a wise choice is an important factor in the probable success of the teacher and the welfare of boys and girls.

It is common observation that the prospect of teaching in the primary grades challenges and excites one teacher and leaves another unattracted and indifferent. An opportunity to teach young adolescents might be eagerly accepted by one teacher, but could alarm and distress another. Someone else might be content only with teaching the more mature high school youth. In a word, teachers tend to indicate that they are better adapted to working with one age level than another.

Whether or not teachers are appropriately placed depends on numerous factors. Among these might be the teacher's values, interests, attitudes, and personality traits. The appropriateness of the grade level placement can be thought of as a result of the interaction of these various factors. Further, it may be possible to assess this interaction through the teacher's response to child growth and development characteristics typical of children of various age groups.

The investigation was undertaken to determine whether or not teacher expressions of likes and dislikes toward the characteristics and behavior of children at various grade levels could be useful in determining appropriate grade level placement.

The Problem

It was the purpose of the study to develop a test instrument that would differentiate among elementary school teachers in terms of their appropriate grade level placement.

Basic Assumptions

1. Children of one age group tend to have common characteristics that distinguish them from children of another group.
2. There are differences in the characteristics of teachers who teach at the various grade levels.
3. These differences tend to distinguish teachers who are more adapted to working with one age group than with another.

Definition of terms

1. Primary grades refer to kindergarten through third grade.
2. Intermediate grades refer to fourth through sixth grade.
3. Upper grades refer to seventh and eighth grades.

Delimitations

1. This study is limited to grades kindergarten through eighth.
2. Single subject or special subject matter teachers are not involved in this study.
3. Only graduates or prospective graduates of elementary teacher education programs are considered as subjects.

In recent years much emphasis has been placed on applying effective procedures in the recruitment and selection of teachers. In the main, researchers have classified teachers as a single group without reference to the grade level to which they might best be suited. Their research on teacher personality, teacher

attitude, teacher interest, and the like has given little attention to the grade level differences among the teachers studied. The "typical teacher," however, is as mythical as "the man in the street." Little attention has been directed to whether or not teachers of one grade level might differ from teachers of another.

Others, however, (Ellena, Stevensen and Webb, 1961; Getzels and Jackson, 1963; Bartky, 1953; Amatora, 1954; Morey, 1947; Ryans, 1960;) have suggested directly or indirectly the possibilities of differences among teachers at various grade levels.

A variety of tests, inventories, and other instruments have been used by investigators in identifying teacher attributes. Even if these tests could be brought to bear on the determination of the appropriateness of teaching level, it would seem a sounder approach to focus the teacher's attention directly on the variable of growth and development characteristics of the children at the various grade levels.

Such an instrument could be useful both at the teacher training level and for the in-service placement of fully trained and/or experienced teachers.

The teacher in training at some point in his program must decide on the grade level he proposes to teach. School organization, credentialing regulations, and other factors require that this choice be made in order to provide for a certain amount of specialized training.

Members of the teacher training staff, also, are involved in guiding prospective teachers in this selective process. Effective counseling prior to initial placement could do much to retain teachers in service who might otherwise leave the profession later because of the frustrations induced by being placed at an inappropriate grade level.

Principals and other school administrators are annually confronted with the problem of assigning members of the teaching staff to particular grade levels.

These judgments could be enhanced by the use of a test instrument that would indicate the appropriate grade level placement of teachers.

At the present time, prospective teachers, teacher training advisors, and school administrators have little to guide them in their choices except tradition and intuition. For example, the elementary--and more particularly the primary--grades are staffed predominantly by women. On the secondary level, men tend to dominate the mathematics and science classrooms; women, the language arts. There is no scientific or logical support for the notion that men are better high school science teachers than women. Neither does it hold that women are more appropriately placed in the first grade than are men.

Procedures

The procedure adopted for the test construction were those standard in the field. A preliminary form was developed, administered and analysed. On the basis of the analysis, a revised form was constructed, and administered to new experimental groups. Estimates of validity and reliability were made, and the usefulness of the test as a guidance tool for assisting in the appropriate grade level placement of teachers was evaluated.

The preliminary form of the test consisted of 431 brief statements descriptive of the characteristics and behavior of children of elementary school age. These items were secured from two sources. The first source was approximately 400 elementary school teachers; the second source was the literature of child growth and development. This form of the test was administered to three criterion groups of teachers composed of 50 teachers each at the primary, intermediate, and upper grade levels.

The test was then subjected to a chi-square item analysis which yielded 247 items that differentiated among the three groups at the 5 per cent level of significance.

It now became possible to construct three scoring keys, one for each of the three grade level groups. A second chi-square analysis was applied which yielded 150 items that differentiated among the three grade level groups at the 5 per cent level of significance. The final form of the test was then administered to a cross-validation group of 178 experienced teachers and to another group of 80 student teachers.

FINDINGS

Reliability: Reliability estimates of the test were calculated by both the Kuder-Richardson Formula 20 technique and by deriving standard errors of measurement for the three scales. These data along with the means and standard deviations are presented in the table below.

Table 1

RELIABILITY COEFFICIENTS AND STANDARD ERRORS OF MEASUREMENT FOR THE REVISED FORM OF TEST

Scale	M	S.D.	r	SE_m Raw Scores	SE_m Standard Scores
Primary	20.70	5.47	.65	3.23	5.91
Intermediate	21.34	9.69	.89	3.20	3.30
Upper	32.64	6.85	.76	1.64	2.40

Validity: The design of the test construction, of course, built in the notion of concurrent or status validity. The item analysis procedures provided for the retention of those items that empirically differentiated one group from the other. It was still important, however, to measure the degree to which the revised form discriminated among the criterion groups. First, the primary, intermediate, and upper grade criterion groups were scored on each of the three scoring keys.

The F-test of the significance of differences between the three means was then applied. Each key was applied serially to the three criterion groups.

The results of these calculations are show in Table 2.

All three F values were significant at the .001 per cent level.

Table 2

Values of F for each key - Criterion Groups

	Sum of Squares	df	Variance Estimate	F
Primary Key				
Between	860.57	2	430.29	
Within	3191.80	147	21.71	
Total	4052.37	149		
				19.82*
Intermediate Key				
Between	2401.12	2	1200.56	
Within	13088.94	147	89.04	
Total	15490.06	149		
				13.48*
Upper Key				
Between	2517.88	2	1258.94	
Within	7701.16	147	52.39	
Total	10219.04	149		
				24.03*

*significant at the .001 level.

These calculations provided confidence in the ability of the test to differentiate teachers at the three grade levels described. However, the analysis is based only on the samples used to identify the items; cross-validation is therefore essential before one can conclude that the three keys have valid power to differentiate.

Therefore, two experimental groups were employed to gather additional evidence of validity of the revised form. The first group was composed of 178 teachers in the field, sixty-five of whom were enrolled in graduate classes at San Francisco State College.

The second group included eighty student teachers who were tested in the last week of their student teaching program. In Table 3 the two experimental groups are classified.

Table 3

Number of Subjects in Experimental Groups

	Student Teachers	Experienced Teachers
Primary	41	54
Intermediate	35	62
Upper	4	62
Total	80	178

As in the case of the criterion groups, the F-test was applied to the two experimental groups. The results of these calculations for the experimental group of 178 experienced teachers are given in Table 4; and for the experimental group of eighty student teachers in Table 5.

Table 4

Values of F for Each Key - Experienced teachers

	Sum of Squares	df	Variance Estimate	F
Primary Key				
Between	570.97	2	285.48	
Within	4033.21	175	23.05	
Total	4604.18	177		12.39*
Intermediate Key				
Between	1365.15	2	682.58	
Within	19727.90	175	112.73	
Total	21093.05	177		6.05**
Upper Key				
Between	488.49	2	244.25	
Within	13405.77	175	76.60	
Total	13894.26	177		3.19***

*significant at the .001 level.
**significant at the .01 level.
***significant at the .05 level.

Table 5

Values of F for Each Key - Student Teachers

	Sum of Squares	df	Variance Estimate	F
Primary Key				
Between	273.98	2	136.99	
Within	2707.97	77	35.17	
Total	2981.97	79		3.90***
Intermediate Key				
Between	269.31	2	134.65	
Within	6686.08	77	86.83	
Total	6955.39	79		1.55****
Upper Key				
Between	701.56	2	350.78	
Within	4017.93	77	52.18	
Total	4719.49	79		6.72**

**significant at the .01 level.
***significatn at the .05 level.
****not significant.

SUMMARY

Children differ. Teachers differ. These were the central assumptions of this study. The issue investigated was that of determining the degree to which these differences might be assessed so as to specify the most appropriate grade level placement of an elementary school teacher.

The dimensions on which these differences might have been measured were many, and could have included interests, attitudes, values, abilities, needs, and the like. The writer, however, chose to focus on teacher-pupil relationships as revealed by teachers' responses to the emotional and developmental characteristics of children. A test instrument was designed and constructed whose aim was to differentiate among teachers at the primary, intermediate, and upper grade levels. Such an instrument, if valid and reliable, could be of value to teachers, teacher-training personnel, and school administrators for the placement of teachers at the most appropriate grade level.

Although the professional literature is rich in research on the characteristics of teachers in general, little has been said about subgroups, and particularly about distinctions within the elementary grades.

The reliability estimates were modest, but high enough to warrant experimental use of the test. The test differentiated the three criterion groups at the 1 per cent level of significance, and a cross-validation sample of 178 experienced teachers at the .02 level. Two of the three scales also gave significant results in a cross-validation sample of eighty student teachers.

REFERENCES

Amatora, Mary, "Grade Level Similarities and Differences in Teacher Personality," School and Society, 79:25-28, January 23, 1954.

Bartky, John A., Supervision as Human Relations (Boston: D.C Heath, 1953).

Ellena, William J., Margaret Stevenson, and Harold V. Webb (eds.), "Who's A Good Teacher," American Association of School Administrators et al., Washington, D.C., 1961.

Getzels, J. W. and P. W. Jackson, in N. L. Cage (ed.), Handbook of Research on Teaching (Chicago, Ill.: Rand McNally & Co., 1963).

Morey, Elwyn, "Vocational Interests and Personality Characteristics of Women Teachers" (Unpublished Ph.D. dissertation, University of California, Berkeley, 1947).

Ryans, David G., Characteristics of Teachers (Washington, D.C.: American Council on Education, 1960).

ADDENDUM

A follow-up study involving 369 student teachers and 1,381 experienced teachers is currently in progress. Certain preliminary data has been assessed.

1. In order to evaluate the efficiency of each of the three keys (primary, intermediate and upper), with a larger sample, the t-test of significance was used. The results are shown in Table 6.

Table 6

Values of t for Each Key

		P,IU	I,PU	U,IP
Student Teachers	N = 369	11.92*	2.92*	2.57*
Experienced Teachers	N = 1391	11.44*	3.62*	2.66*

*significant at .01 level or better.

The test does, then, appear to differentiate among teachers at the three grade levels.

2. The pattern of mean scores for both student and experienced teachers (N = 1589) was observed and are noted in Table 7.

Table 7

Mean Scores by Grade Level for Each Key

N = 1589

GRADE LEVEL	PRIMARY KEY	INTERMEDIATE KEY	UPPER KEY
K	26	14	29
1	21	15	28
2	21	15	27
3	21	16	30
4	16	18	31
5	14	21	30
6	13	19	33
7-8	11	19	34

The pattern of mean scores for the primary key shows a descending order of values as the grade level increases; mean scores for the intermediate key ascend to and descend from a point in the intermediate grades; and the scores follow essentially an ascending pattern on the upper key. These patterns lend additional credence to the validity of the test.

3. The grade level classifications were arbitrarily defined in the original study. These classifications were regrouped to test this hypothesis and is shown in Table 8. The t-test of significance was applied measuring each grade level against the other two in each grouping.

Table 8

Values of t for Regrouped Grade Levels

N = 1381

	Null Hypothesis	t-value	Reject or no reject
K	Difference	0.47****	reject
1	Difference	1.03****	reject
2	Difference	1.39****	reject
3	No Difference	3.96*	reject
4	Difference	0.76****	reject
5	Difference	1.50****	reject
6	No Difference	3.87*	reject
7	Difference	0.26****	reject
8	Difference	0.64****	reject

*significant at .001 level.
****not significant.

(NOTE: Table 8 is data derived from experienced teachers. The same results were also true of the student teacher sample, N = 369.)

It would appear, then, that the classifications of kindergarten through third, fourth through sixth, and seventh through eighth is appropriate and should not be changed to some other groupings for purposes of scoring keys.